

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human BPI in direct ELISAs.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 971526
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Human embryonic kidney cell line HEK-293-derived transfected with human BPI Val32-Lys487 Accession # P17213
<b>Conjugate</b>	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
<b>Formulation</b>	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide.  *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Intracellular Staining by Flow Cytometry</b>	0.25-1 µg/10 <sup>6</sup> cells	HL-60 Human acute promyelocytic leukemia cell line fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005)

## PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

## BACKGROUND

Bactericidal/Permeability Increasing protein (BPI) is a 55 kDa antibacterial glycoprotein that plays a role in innate immunity (1, 2). It belongs to the lipid transfer protein family that also includes LPS binding protein (LBP), cholesteryl ester transfer protein (CETP), and phospholipid transfer protein (PLTP). Circulating levels of BPI are positively correlated with the levels of cholesterol, LDL cholesterol, and HDL cholesterol (3). Mature human BPI shares approximately 55% amino acid (aa) sequence identity with mouse and rat BPI. It can be secreted as a monomer or as a disulfide-linked homodimer (4). It consists of a highly basic N-terminal and a hydrophobic C-terminal domain (5). Its N-terminal domain confers the ability of BPI to bind bacterial lipopolysaccharide (LPS) found in the cell walls of Gram negative bacteria and to induce the lysis and phagocytosis of these bacteria (6-9). It also blocks the endothelial cell response to endotoxin (10). BPI is stored in neutrophil and eosinophil granules for induced secretion during inflammation (11, 12). It is additionally expressed in mucosal epithelia and testis (10, 13). BPI can be retained on the surface of both neutrophils and epithelial cells, presumably by its hydrophobic C-terminal domain (8, 10). BPI also functions as an anti-angiogenic molecule by inhibiting vascular endothelial cell proliferation and tubule formation (14). Like the antibacterial actions, this function is mediated by the N-terminal region (15).

### References:

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